

## ABSTRACT

Methods of inhibiting osteoclastogenesis and the activity of osteoclasts are disclosed. Methods of treating patients who have diseases characterized bone loss are disclosed. The present invention also provides peptides and peptide analogues designed from a binding loop of a member of the tumor necrosis factor receptor (TNF-R) superfamily. According to the methods, an amount of an inhibitor effective to inhibit osteoclastogenesis is administered to the patient. Methods of modulating dendritic cell maturation, T cell proliferation, and/or CD40 receptor systems in an individual are disclosed. The methods comprise the step of administering to the individual an amount of an inhibitor effective to modulating dendritic cell maturation, T cell proliferation, and/or CD40 receptor systems.